Class Code: 2005
Revised: 8-16-2010

ELECTRICAL ENGINEERING AIDE SPECIALIST II

PURPOSE AND NATURE OF WORK

Positions in this classification perform non-routine and complex technical work on electrical engineering projects, with responsibility for applying theory and principles of electrical engineering toward planning, designing, and conducting a complete project or a portion of a larger and more diverse project. Work involves solving problems by reviewing standard electrical engineering guidelines, technical manuals, and/or administrative procedures and may involve modification of the aforementioned for unusual situations. Independent judgment is required to study previously established, often only partially relevant, guidelines, plan various interrelated activities, and coordinate such activities while completing a project. Work is performed under the direct supervision of a Professional Engineer, who will outline objectives, requirements, and/or design approaches. Nature of the work may involve supervising subordinate employees.

ILLUSTRATIVE EXAMPLES OF WORK (Note: These examples are intended only to illustrate the various types of work performed by incumbents in this class. All of the duties performed by any one incumbent may not be listed, nor does any incumbent necessarily perform all of these duties.)

Designs large overhead and/or underground electrical systems. Will supervise and inspect construction/installation of designed electrical jobs. Analyzes and interprets test information to resolve design-related problems. Provides technical assistance and resolution when electrical and/or engineering problems are encountered before, during, and after construction.

Designs electrical facilities for commercial customers and reviews/comments on plans submitted through Planning, Zoning, and Codes. Meets with developers and contractors to determine needs of the project, designs facilities to meet those needs, modifies designs as needed once construction begins, attends pre-construction meetings to offer insight into foreseeable electrical issues, conducts load studies on electrical facilities to determine adequacy, and performs administrative tasks related to the construction of electrical facilities.

Writes work orders for projects and serves as a contact person between utility companies. Designs overhead electrical systems to include construction of new system, pole removal/replacement, modifies and creates construction unit details for all electrical designers to use, contacts other utilities who may have lines on poles to inform them of plans and monitors the work of these utilities in moving their lines to/from affected poles, estimates costs and writes work orders, designs electric systems for joint-use with other utilities, and performs other administrative tasks related to these duties.

Performs related work as required.

NECESSARY KNOWLEDGE, ABILITIES, AND SKILLS

Knowledge of electrical engineering principles and practices and ability to independently apply those principles and practices towards accomplishing tasks.

Knowledge of and ability to perform mathematical operations specifically related to engineering.

Knowledge of construction techniques and practices.

Knowledge of related building regulations and codes.

Knowledge of and ability to use computer systems and software appropriate to the nature and level of work.

Ability to communicate effectively by telephone, in person, or in writing to both individuals and small groups.

Ability to facilitate and coordinate the work of several technicians, contractors, and others involved in the design and/or construction of projects.

Ability to produce, read, analyze, and comprehend job-related specifications, plans, and/or drawings.

Ability to inspect, investigate, and recommend courses of action related to the position.

Ability to independently solve complex civil engineering related problems related to area of assignment.

Ability to work independently to accomplish tasks.

DESIRED EDUCATION AND EXPERIENCE

Associate's Degree or completion of a technical specialty program of eighteen months – three years duration in electrical (or closely related field) and significant prior working experience in the electrical engineering field incorporating the necessary knowledge, skills, and abilities required for the specific position.